Assignment -4

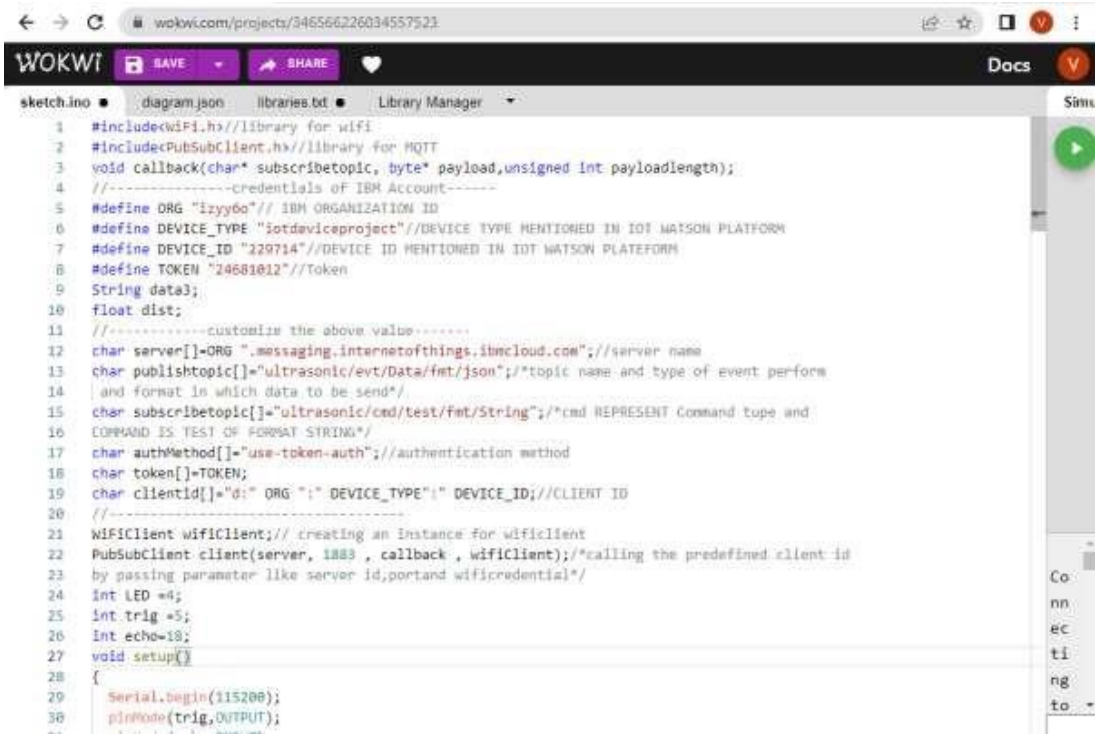
Python Programming

Assignment Date	26 October 2022
Student Name	Sajeev Krishna R
Student Roll Number	917719IT081
Maximum Marks	2 Marks

Question-1:

Write code and connections in wokwi for ultrasonic sensor.
Whenever distance is less than 100 cms send "alert" to ibm cloud and display in device recent events.
Upload document with wokwi share link and images of ibm cloud.

Solution:



wokwi.com/projects/346566226034557523

WOKWI SAVE SHARE Docs

sketch.ino diagram.json libraries.txt Library Manager

```
    }
    initManagedDevice();
    Serial.println();
  }
}
void wificonnect()//function defenition for wificonnect
{
  Serial.println();
  Serial.print("Connecting to ");
  WiFi.begin("Wokwi-GUEST", "",6);//PASSING THE WIFI CREDIDENTIALS TO ESTABLISH CONNECTION
  while (WiFi.status() !=WL_CONNECTED){
    delay(500);
    Serial.print(".");
  }
  Serial.println("");
  Serial.println("WiFi connected");
  Serial.println("IP address");
  Serial.println(WiFi.localIP());
}
void initManagedDevice(){
  if(client.subscribe(subscribetopic)){
    Serial.println((subscribetopic));
    Serial.println("subscribe to cmd OK");
  }else{
    Serial.println("subscribe to cmd failed");
  }
}
void callback(char* subscribetopic,byte*payload,unsigned int payloadLength)
{
  Serial.print("callback invoked for topic: ");
  Serial.println(subscribetopic);
```

Connecting to

wokwi.com/projects/346566226034557523

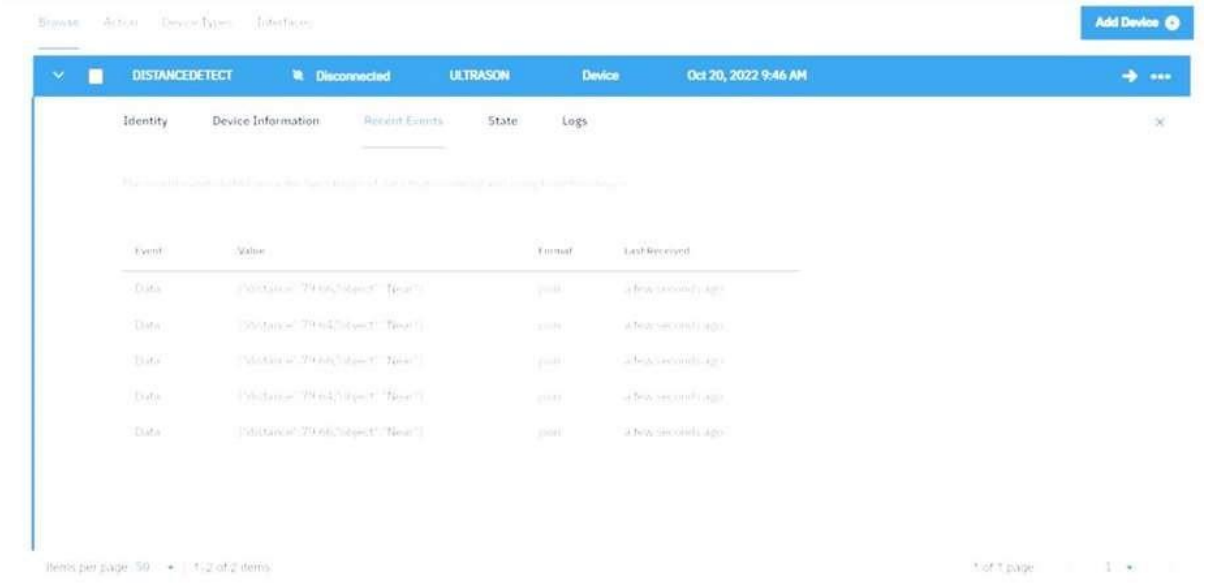
WOKWI SAVE SHARE

sketch.ino diagram.json libraries.txt Library Manager

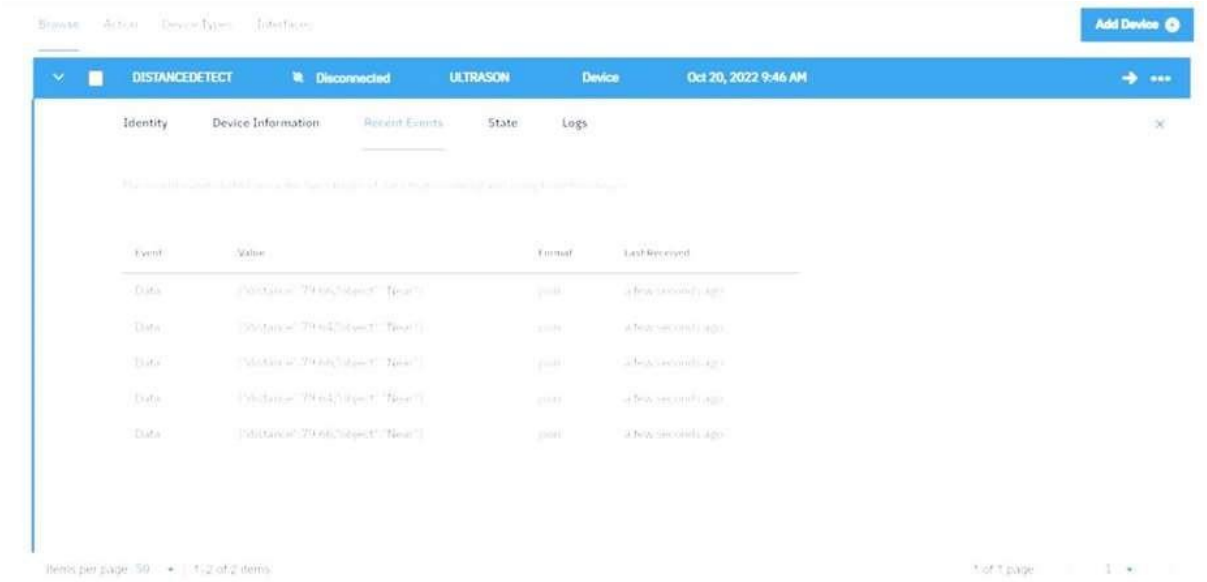
```
  for(int i=0; i< payloadLength; i++){
    //Serial.print((char)payload[i]);
    data3 +=(char)payload[i];
  }
  //Serial.println("dta: "+ data3);
  //if(data3=="Near")
  //{
  //Serial.println(data3);
  //digitalWrite(LED,HIGH);
  //}
  //else
  //{
  //Serial.println(data3);
  //digitalWrite(LED,LOW);
  //}
  data3="";
}
```

OUTPUT:

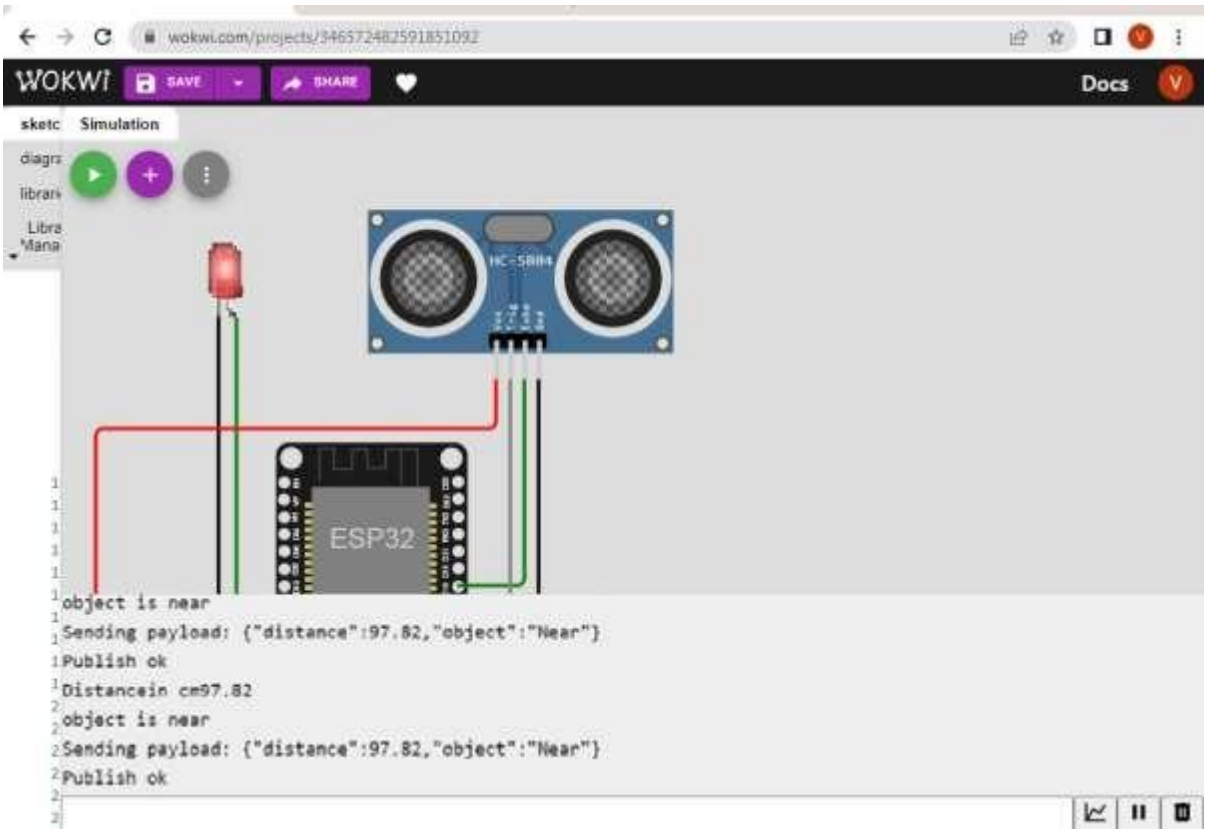
DATA IS SENT TO IBM CLOUD WHEN NO OBJECT IS DETECTED



When no object is detected



When object is detected in ultrasonic detector


wokwi.com/projects/346572482591851092
WOKWI
SAVE
SHARE
Docs
Simulation
HC-SR04
ESP32
object is near
Sending payload: {"distance":97.82,"object":"Near"}
Publish ok
Distancein cm97.82
object is near
Sending payload: {"distance":97.82,"object":"Near"}
Publish ok